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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/575,129	05/23/2000	Paul Lapstun	NPT002US	9175
24011	7590	02/18/2005	EXAMINER	
SILVERBROOK RESEARCH PTY LTD 393 DARLING STREET BALMAIN, 2041 AUSTRALIA			JORGENSEN, LELAND R	
			ART UNIT	PAPER NUMBER
			2675	

DATE MAILED: 02/18/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

09/575,129

**Applicant(s)**

LAPSTUN ET AL.

**Examiner**

Leland R. Jorgensen

**Art Unit**

2675

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 23 September 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1 - 167, 169-172, and 177 - 180 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1 - 167, 169-172, and 177 - 180 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |                                                                                                                        |                                                                                         |
|------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                            | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____                                                |

## **DETAILED ACTION**

### ***Claim Objections***

#### **Claims 25, 101 – 105, and 164 - 176**

1. In view of the amendment filed 23 September 2004, the objections to claims 25, 101 – 105, and 164 - 176 under 37 CFR 1.75(c) as being in improper form is withdrawn.

### ***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1 - 10, 34 – 36, 38 - 46, 49 – 52, 5, 65 – 69, 75 – 77, 82 – 91, 114, 119 – 121, 123 - 131, 134 – 140, 150 – 154, 158 – 162, 167, and 177 - 180 are rejected under 35 U.S.C. 102(e) as being anticipated by Dymetman, USPN 6,330,976 B1.

#### **Claims 1, 3, 4, 6, 82, 84 - 86, 88, and 89**

Dymetman teaches a method and system of enabling user interaction with computer software running in a computer system. An interface surface [hardcopy document 2] contains information relating to the computer software and having disposed therein or thereon coded data indicative of an identity of the interface surface [first set of markings 208 that uniquely identifies the page] and a plurality of reference points of the interface surface [second set of markings 202

Art Unit: 2675

that identifies position]. Dymetman, col. 8, lines 45 – 67; col. 12, lines 29 – 46; and figures 1 – 3. A sensing device [pointer 502] sense at least some of the coded data when the sensing device is placed in an operative position relative to the interface surface. Dymetman, col. 8, lines 45 – 67; col. 15, lines 29 – 44; and figures 1, 2, & 8.

The sensor uses at least some of the decoded coded data to generate indicating data indicative of the identity of the interface surface [first set of markings 208 that uniquely identifies the page]; and at least one of a position [second set of markings 202 that identifies position] and a movement (col. 35, lines 12 – 19) of the sensing device relative to the interface surface. Dymetman, col. 9, lines 17 – 23; col. 12, lines 29 – 46; and figures 1 – 3.

The method including the steps of, in the computer system: (a) receiving the indicating data from the sensing device; (b) using the indicating data to identify at least one interactive element relating to the computer software; and (c) operating the computer software in accordance with instructions associated with the at least one interactive element. Dymetman, col. 10, lines 11 – 67; col. 18, lines 39 – 55; col. 24, lines 1 – 12; and figure 13.

### **Claims 2, 5, 83, and 87**

Dymetman teaches that the interactive element is associated with a zone [zone or cell 202] of the interface surface, and step (b) includes using at least one of the position [second set of markings 202 that identifies position] and the movement of the sensing device to identify the zone and thereby the interactive element. Dymetman, col. 12, lines 29 – 46; and figure 3.

**Claim 7 – 10, 90, and 91**

Dymetman teaches a hyperlink element relating to the computer software and a method including the step of effecting, in the computer system, an operation associated with the hyperlink element. Dymetman, col. 5, lines 39 – 44.

**Claims 34 and 119**

Dymetman teaches that each tag is indicative of the identity [page identifier (pid) or sticker identifier (pid')] of the region and the position [location code (loc or loc')] of the tag within the region. Dymetman, col. 9, lines 16 – 22.

**Claims 35 and 120**

Dymetman teaches that each of the tags includes first identity data defining a relative position [location code (loc or loc')] of that tag; and second identity data identifying the surface [page identifier (pid) or sticker identifier (pid')].

**Claims 36 and 121**

It is inherent that the surfaces described by Dymetman may be defined by a substrate.

**Claims 38 – 43, 73 – 77, 123 – 128, and 158 - 162**

Dymetman show these patterns. Dymetman, figures 3 and 5B – 10.

**Claims 44 and 129**

Dymetman teaches that each of the each of the tags [zone or cell 202] includes at least one common feature [orientation marker 206] in addition to the second identity data [first set of markings 208 that identifies the page]. (The first identity data corresponds to the second set of markings 202 that identifies the position on the page.) Dymetman, col. 12, lines 30 – 46; and figure 3.

**Claims 45 and 130**

Dymetman teaches the orientation marker 206 that is configured to assist finding and/or recognition of the tags by associated tag reading apparatus. Dymetman, col. 12, lines 30 – 46; and figure 3.

**Claims 46 and 131**

Dymetman shows that each cell [zone or cell 202] has a orientation marker, thus incorporating redundancy of information. Dymetman, col. 12, lines 30 – 46; and figure 3.

**Claims 49 and 134**

Dymetman teaches that each of the tags [zone or cell 202] includes at least one orientation feature [orientation marker 206] for enabling a rotational orientation of the tag being read to be ascertained. Dymetman, col. 12, lines 30 – 46; and figure 3.

**Claims 50 and 135**

Dymetman shows that each cell [zone or cell 202] has a orientation marker, thus incorporating redundancy of information. Dymetman, col. 12, lines 30 – 46; and figure 3.

**Claims 51 and 136**

Dymetman shows a pattern in figure 3 where the orientation features are rotationally asymmetric.

**Claims 52 and 137**

Dymetman shows identifiers that are skewed along a major axis. Dymetman, figure 5B. It would have been obvious to one of ordinary skill in the art at the time of the invention to use the same skewing for the orientation feature.

**Claims 55 and 140**

Dymetman teaches that each tag [zone or cell 202] includes a plurality of tag elements, the first [second set of markings 202 that identifies the position on the page] and second identity data [first set of markings 208 that identifies the page] each being defined by a plurality of the elements. Dymetman, col. 12, lines 30 – 46; and figure 3.

**Claims 65 and 150**

Dymetman shows that each cell [zone or cell 202] has first identify data [second set of markings 202 that identifies the position on the page], thus incorporating redundancy of information. Dymetman, col. 12, lines 30 – 46; and figure 3.

**Claims 66 and 151**

Dymetman shows that each cell [zone or cell 202] has second identify data [first set of markings 208 that identifies the page], thus incorporating redundancy of information. Dymetman, col. 12, lines 30 – 46; and figure 3.

**Claims 67 and 152**

It is inherent to Dymetman that the tags are printed out onto the surface by means of a printer.

**Claims 68 and 153**

Dymetman teaches that printer is an ink printer. Dymetman, col. 11, lines 63 – 65.

**Claims 69 and 154**

Dymetman teaches that the tags are printed using ink that is absorbent or reflective in the ultraviolet spectrum. Dymetman, col. 11, lines 52 – 62.

**Claims 114 and 167**

Dymetman teaches that the coded data is printed onto the surface to be substantially invisible to an unaided human eye. Dymetman, col. 11, line 46 – col. 12, line 28; col. 12, lines 59 – 67; and figure 4.

**Claims 177 - 180**

Dymetman teaches that at least some of the visible information represents the interactive element. The interactive element is associated with a region of the interface surface such that when the sensing device is placed in an operative position relative to the interactive element, the sensing device senses coded data provided within the region and generates the indicating data using the sensed coded data. The method includes, in the computer system, using the indicative data to identify the region and thereby the interactive element. Dymetman, col. 10, lines 11 – 67; col. 18, lines 39 – 55; col. 24, lines 1 – 12; and figure 13.

***Claim Rejections - 35 USC § 103***

4. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

5. Claims 11 – 13, 70 – 72, 78, 92 – 96, 155 – 157, and 163 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dymetman in view of Lesnick et al., USPN 4,760,606.

**Claims 11 – 13 and 94 - 96**

Dymetman teaches filling in multi-choice paper forms. Dymetman, col. 31, line 26.



Although inherent to such processing data from multi-choice paper forms, Dymetman does not specifically teach that the method includes the steps of identifying, in the computer system, that the user has entered a hand-drawn mark by means of the sensing device and effecting, in the computer system, an operation associated with the checkbox field.

Lesnick teaches identifying, in a computer system, that the user has entered a hand-drawn mark by means of the sensing device and effecting, in the computer system, an operation associated with the checkbox field. Lesnick, col. 5, lines 1 – 5; and figure 6.

It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the identifying system of as taught by Lesnick with the method and system as taught by Dymetman to allow the user to enter marks identifying the document and desired options for the document. Lesnick invites such combination by teaching,

Accordingly, it is a principal object of this invention to provide an efficient means of digitizing multiple specimens (or documents).

Also, it is an object of this invention to greatly reduce the need for user dependency, and thus increase automation, during the digitizing process.

Further, it is an object of this invention is to efficiently classify and file the digitized documents.

Lesnick, col. 1, lines 33 – 40.

#### **Claims 70 and 155**

Lesnick show that the printer also prints additional information onto the surface.  
Lesnick, figure 6.

#### **Claim 71, 72, 156, and 157**

Dymetman teach that the information is printed onto the surface using colored inks, including cyan, magenta, and yellow inks. CMY is an acronym for cyan, magenta, and yellow.

**Claims 78 and 163**

Lesnick shows additional non-tag information disposed on the surface. Lesnick, figure 6.

**Claim 92 and 93**

Lesnick teaches that data indicative of a name and/or value of at least one field related to the computer software and of a selected object. Lesnick, figure 6.

6. Claims 14 – 17 and 97 - 100 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dymetman in view of Tran, USPN 6,157,935.

**Claims 14 – 17 and 97 - 100**

Dymetman teaches entering and decoding handwritten text data. Dymetman, col. 30, line 65 – col. 31, line 40.

Although inherent to the method of entering and decoding handwritten text data, Dymetman does not specifically teach identifying, in the computer system, that the user has entered handwritten text data by means of the sensing device and effecting, in the computer system, an operation associated with the text field.

Tran teaches that the interactive element is a text field relating to the computer software and identifying and converting, in the computer system, that the user has entered handwritten text data by means of the sensing device and effecting, in the computer system, an operation associated with the text field. Tran, col. 2, lines 53 – 56; and col. 11, line 3 – col. 12, line 14.

It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the handwritten text data system and method as taught by Tran with the method and system as taught by Dymetman to produce such system and method that would utilize easily

Art Unit: 2675

entered handwritten notations on a hardcopy document. Tran invites such combination by teaching,

Additionally, the user had to master many complex and arbitrary operations. For example, to find the proper commands, the user needed to traverse several nodes of a menu. Advances in computer technology had not simplified life for users, since these advances have been largely employed to build more complex functions and modeling capability into the spreadsheet with even more menus and sub-menus. Since the alternative of perusing through a staggering array of incomprehensible icons was not also palatable to users, most users only used a fraction of the available commands and features. Furthermore, conventional computerized spreadsheets and databases still required users to manually enter the information.

Additionally, applications such as spreadsheets, databases, project planning tools and CAD/CAM systems required large display areas to quickly and conveniently interact with users. However, portable computing appliances must balance the conflicting requirements of the readability of the displayed characters and the size of their display screens. On one hand, the portability requirement implied that the screen be small. On the other hand, the readability requirement pushed in the opposite direction and dictated that the display area be as large as possible. However, as computing appliances with large screens consumed more power, were more fragile, expensive and bulkier, most portable computers offered only a small display surface. The selection of a small display size restricted the user into making undesirable choices between displaying either larger characters or more information. For busy executives, attorneys, doctors and other professionals, such restrictions were impractical. Thus, the display system need to be portable, cost effective, and easy to use in comparison with the pen and paper approach before the conventional pen and paper method can be replaced.

In addition to being as easy to use as the pen and paper approach, the portable computing appliance needed to provide information integration advantages, including the ability to capture data from scanners, barcode readers, or the Internet, over the cheaper pen and paper approach to further justify the expense associated with such electronic computer systems. Furthermore, as portable computers are typically deployed in field applications by service providers where employees are scattered over a wide geographic area, the information advantages arising from integrating data associated with a global positioning system (GPS) are needed in the management and control of field personnel to ensure that the employees are actually at the respective expected locations. Additionally, an ability to link information generated at the client's site with follow-up discussions and letters necessary to close the transaction is needed to enhance the efficiency of field personnel.

Tran, col. 1, line 60 – col. 2, line 50.

7. Claims 18 – 22 and 101 - 105 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dymetman in view of Obata et al., USPN 6,002,783.

**Claims 18 – 22 and 101 - 105**

Dymetman teaches that the interactive element may define a signature field. Dymetman, col. 17, lines 29 – 30.

Dymetman does not specifically teach that the interactive element is a signature field relating to the computer software, and that the method includes identifying, in the computer system, that the user has entered a handwritten signature by means of the sensing device and effecting, in the computer system, an operation associated with the signature field.

Obata teaches teach that the interactive element is a signature field relating to the computer software, and that the method includes identifying, in the computer system, that the user has entered a handwritten signature by means of the sensing device and effecting, in the computer system, an operation associated with the signature field. Obata, col. 5, lines 16 – 49; and figure 3.

It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the signature field of Obata with the method and system as taught by Dymetman to produce a system and method to inexpensively verify the user. Obata invites such combination by teaching,

There have been various object identification systems such as an image checking system using images of fingerprints, a voice checking system using voices such as voiceprints. Among them, a signature checking system using hand-

Art Unit: 2675

written signatures of card carriers is considered useful because of its simple hardware structure, low manufacturing cost and less handling difficulty.

Such signature checking systems are used in various fields. ...

Obata, col. 1, lines 23 – 34.

8. Claims 23 - 26, 28, 29, 32, 106 - 108, 112, 115, and 116 are rejected under 35

U.S.C. 103(a) as being unpatentable over Dymetman in view of Cass, USPN 5,692,073.

**Claims 23, 25, 106, and 108**

Dymetman teaches that the interactive element may produce a drawing field. Dymetman, col. 17, lines 2 – 35; and col. 30, line 65 – col. 31, line 40.

Although inherent to the method of entering and decoding a drawing field, Dymetman does not specifically teach identifying, in the computer system, that the user has entered a hand-drawn picture by means of the sensing device and effecting, in the computer system, an operation associated with the drawing field.

Cass teaches a drawing field related to the computer software and identifying, in the computer system, that the user has entered a hand-drawn picture by means of the sensing device and effecting, in the computer system, an operation associated with the drawing field. Cass, col. 14, lines 8 – 24; col. 14, line 53 – col. 15, line 32; and figures 13 - 19.

It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the on demand printing as taught by Cass with the method and system as taught by Bennett and Lesnick to produce a system and method to more easily input computer data. Cass invites such combination by teaching,

A paper-based user interface can serve as a complement or substitute for the more conventional keyboard-mouse-display type of user interface mentioned earlier. A paper-based user interface is particularly appealing when the user interacts with a computer network directly through a multifunction device, without recourse to a personal computer or workstation. In this situation, the user can initiate a number of functions, such as document copying, facsimile, electronic mail, document storage, and search using a simple paper form as an interface. The multifunction device "reads" what is on the form and responds accordingly, possibly with help from the network.

Cass, col. 2, lines 17 – 28.

#### **Claims 24 and 107**

Dymetman teaches activating, in the computer system, a hyperlink. Dymetman, col. 5, lines 39 - 44.

#### **Claims 26 and 112**

Cass teaches printing the interface surface on demand. Cass, col. 17, lines 4 – 36.

#### **Claim 28**

Dymetman teaches that the coded data is printed onto the surface to be substantially invisible to an unaided human eye. Dymetman, col. 11, line 46 – col. 12, line 28; col. 12, lines 59 – 67; and figure 4.

#### **Claims 29 and 115**

Cass teaches retaining a retrievable record of each interface surface printed, the interface surface being retrievable using the identity contained in its associated coded data. Cass, col. 10, line 12 – col. 11, line 5; col. 11, lines 15 – 33; and col. 17, lines 37 – 49.

**Claims 32 and 116**

Cass teaches providing sufficient coded data relating to the computer software in the interface surface to eliminate the need for a separate display device. Cass, col. 2, lines 17 – 28; col. 7, lines 28 – 34.

9. Claims 27 and 113 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dymetman and Cass as applied to claims 26 or 112 above, and further in view of LaMarca et al., USPN 6,279,013 B1.

**Claims 27 and 113**

Although it may be inherent to the system as taught, Dymetman does not specifically teach substantially simultaneously printing the interface surface and the coded data onto a substrate.

LaMarca teaches substantially simultaneously printing the interface surface and the coded data onto a substrate. LaMarca, col. 5, lines 4 – 12 and 34 – 40; and figures 1 and 2. LaMarca also teaches a printer 40 for printing a document 10 and 42. LaMarca, figures 1 and 2. LaMarca teaches a user interactive element [tokens 18, 20, 22, 24, 60, 62, 64, and 66] with coded data [dataglyphs] indicative of an identity of the document and an identity of the at least one user interactive element. LaMarca, col. 3, lines 59 – 64; col. 5, lines 1 – 5; col. 6, lines 1 – 8; and figures 1 – 4. LaMarca teaches a sensing device [smart wand 70] for interacting with the at least one user interactive element and transmitting request data to the computer system to facilitate the further directory information being sent from the computer system to the printer for printing in a further document, the request data being indicative of the identity of the document and an

Art Unit: 2675

identity of the at least one user interactive element. LaMarca, col. 5, lines 16 – 26; col. 6, lines 24 – 52; and figure 5.

It would have been obvious to one of ordinary skill in the art at the time of the invention to combine simultaneous printing of the directory entries and coded data as taught by LaMarca with the method and system for navigating a directory as taught by Cass. LaMarca invites such combination by teaching,

The present invention contemplates a new and improved system which overcomes the prolix disadvantages of mass media print communication to effectively combine the advantageous features of the two relevant technologies. That is, the customized newspaper which can now be read on an electronic display, is combined with the affordances and conveniences of a printed paper interface, for a resulting interactive newspaper, customized to a subscriber-identified profile.

LaMarca, col. 1, line 65 – col. 2, line 6. LaMarca teaches the following benefits.

One benefit obtained by use of the present invention is a customizable push system for a mass media document so that readers can adjust by general subject matter what content is presented in subsequent editions of the document.

Another benefit obtained from the subject invention is the provision of a document which is customized to a reader, and thereby comprises a much more efficient presentation, paper consumption and time investment to a reader in ultimately reviewing the document.

A further benefit of the subject invention is back channel communication from a class of readers to a publisher on the relative interest of a plurality of selected items in the document or a response to explicit questions for the reader, whereby the publisher can have an appreciation of reader interest in different articles and responses to specific questions.

Yet another benefit of the present invention is a convenient vehicle for the subscriber to solicit more detailed or expanded information on a subject only first generally identified by the publisher.

LaMarca, col. 2, line 64 – col. 3, line 17.



Art Unit: 2675

10. Claims 30 and 117 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dymetman et al. in view of Microsoft Press Computer Dictionary, 3<sup>rd</sup> Ed ((1997).

**Claims 30 and 117**

Dymetman does not specifically teach multicast or pointcast communications protocols, Microsoft Press Computer Dictionary teaches multicast and pointcast communications protocols. Microsoft Press Computer Dictionary, pp. 300, 318, and 371.

It would have been obvious to one of ordinary skill in the art at the time of the invention to combine such protocols as taught by the Microsoft Press Computer Dictionary with the method and system as taught by Dymetman to provide a push technology “where the server automatically uploads data without a specific command from the client.” Dictionary, p. 371.

11. Claims 31, 110, and 111 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dymetman et al. in view of Junod et al., USPN 5,854,621.

**Claims 31, 110, and 111**

Dymetman does not teach that the sensing device containing an identification means that imparts a unique identity to the sensing device and identifies it as belonging to a particular user, wherein the method includes the step of monitoring, in the computer system, said identity.

Junod teaches that the sensing device containing an identification means that imparts a unique identity to the sensing device and identifies it as belonging to a particular user, wherein the method includes the step of monitoring, in the computer system, said identity. Junod, col. 5, lines 34 – 53; and figure 4.

Art Unit: 2675

It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the sensing device identifier as taught by Junod with the sensing device as taught by Dymetman to provide a method to identify the sensing device. Junod invites such combination by teaching,

As the range of wireless transmission increases, a continuing problem with the prior art is the simultaneous operation of multiple wireless peripherals which are transmitting to different host computer systems. These peripherals can have conflicting transmission signals, while the peripherals are in transmission range of each other.

There has also been a need in the art to have a wireless receiver which can receive information from more than one peripheral device, such as receiving cursor information from both a wireless mouse and a wireless pointing device used for software presentations.

As a result, there has been a need for a communications device which would permit elimination of the cable connection between the mouse and the receiver, while at the same time permitting an inexpensive, reliable and continuous communication between the mouse and the receiver. There has also been a comparable need for a similar communications interface between the host and other peripherals, such as trackballs, keyboards, digitizing tablets, etc. There has further been a need for a communications interface which can differentiate between multiple wireless devices used on different computers and can also allow more than one wireless device to transmit information to the same computer.

Junod, col. 1, line 57 – col. 2, line 13. Junod concludes,

As can be appreciated from the foregoing, the omnidirectional transmission of the signal from the transmitter in the mouse 10 to the host adapter 20 eliminates most concerns about obstacles in the transmission path while at the same time permitting significantly improved freedom for the user by eliminating any mechanical connection from the mouse 10 to the host system 30. In addition, the identification code information and the ability to choose multiple transmission channels upon which to transmit avoids most concerns of radio interference with other devices in the environment. It will be appreciated that the present invention also provides a method and means for receiving signals from more than one wireless peripheral device and that it minimizes power consumption at the transmitting end. It can further be appreciated that this same interface, while described here in detail only in connection with an electronic mouse, can similarly be used with numerous other peripherals.

Junod, col. 9, lines 48 – 64.

12. Claims 33 and 118 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dymetman et al., or Dymetman et al., in view of Cass, as applied to claims 112 above, and further in view of Kobayashi et al, USPN 5,881,352.

**Claims 33 and 118**

Dymetman does not teach that wherein the interface surface is printed on multiple pages, the method including the step of binding the pages.

Kobayashi et al teaches a means for binding the document in the event the document includes a plurality of pages. Kobayashi, col. 1, lines 7 – 21.

It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the binder of Kobayashi with the system of Dymetman or Dymetman and Cass. Such combination provides easy binding of collected sheets and covers without manual labor. Kobayashi, col. 2, lines 36 – 48.

13. Claims 37 and 122 are rejected under 35 U.S.C. 103(a) as being unpatentable Dymetman et al. in view of Kaule, USPN 6,302,989 B1.

**Claims 37 and 122**

Dymetman does not teach that the substrate is laminar.

Kaule teaches a laminar substrate. Kaule, col. 3, lines 27 – 45; col. 4, lines 6 – 10; and figure 1.

It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the laminar substrate as taught by Kaule with the method and system as taught by Dymetman to protect the tags, that is the optically variable element, on the surface.

14. Claims 47, 48, 56 – 64, 109, 132, 133, and 141 - 149 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dymetman et al. in view of Sekendur, USPN 5,477,012.

**Claims 47, 48, 132, and 133**

Dymetman does not specifically teach that the common feature is rotationally symmetric or ring shaped.

Sekendur teaches that the a feature that is rotationally symmetric so as to be rotationally invariant and is ring-shaped. Sekendur, col. 4, lines 28 – 41; and figures 1 – 2.

It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the ring-shaped feature as taught by Sekendur with the method and invention as taught by Dymetman to produce compact, rotationally invariant tags.

**Claims 56 and 141**

Sekendur teaches that the tag elements are disposed in one or more arcuate bands around a central region of each tag. Sekendur, col. 4, lines 28 – 41; and figures 1 – 2.

**Claims 57 and 142**

Sekendur teaches that there are a plurality of the arcuate bands disposed concentrically with respect to each other. Sekendur, col. 4, lines 28 – 41; and figures 1 – 2.

**Claims 58, 59, 143, and 144**

Sekendur shows a center circle that forms a small dot. The dot may have two values, black or white. Sekendur, col. 4, lines 28 – 41; and figures 1 – 2.

**Claims 60 and 145**

It is inherent to any of the systems and methods of Dymetman, and Sekendur that wherein when representing one of the possible values, the tag elements absorb, reflect or fluoresce electromagnetic radiation of a predetermined wavelength or range of wavelengths to a predetermined greater or lesser extent than the surface. See e.g. Dymetman, col. 11, lines 47 – 62. See specifically Sekendur, col. 4, lines 15 – 27 and 50 – 59.

**Claims 61 and 146**

It is inherent to any of the systems and methods of Dymetman, and Sekendur that the possible values of the tag elements are defined by different relative absorption, reflection or fluorescence of electromagnetic radiation of a predetermined wavelength or range of wavelengths. See e.g. Dymetman, col. 11, lines 47 – 62. See specifically Sekendur, col. 4, lines 15 – 27 and 50 – 59.

**Claims 62 and 147**

Both Dymetman and Sekendur teach that the tags are not substantially visible to an average unaided human eye under daylight or ambient lighting conditions. Dymetman col. 11, lines 47 - 62. Sekendur, col. 4, lines 26 – 27.

**Claims 63 and 148**

Dymetman teaches that the tags are slightly visible to an average unaided human eye under daylight or ambient lighting conditions. Dymetman, col. 7, lines 59 – 62.

**Claims 64 and 149**

Dymetman teaches that the tags are visible to an average unaided human eye under daylight or ambient lighting conditions. Dymetman, col. 11, lines 63 – 65.

**Claim 109**

Sekendur teaches a sensing device [pen shaped optical conduit 8] includes a marking nib [writing element 9]. Sekendur, col. 4, line 60 – col. 15; and figures 6 & 7.

15. Claims 53, 54, 79 – 81, and 164 – 166, 169 - 172 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dymetman et al., in view of Bennett et al., USPN 5,051,736.

**Claims 53, 54, 138, 139, 169 - 172**

Dymetman does not specifically teach a perspective feature.

Bennett teaches includes perspective feature for enabling a perspective distortion of the tag being read to be ascertained. Bennett, col. 11, lines 59 – 62.

It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the perspective feature as taught by Bennett with the method and system as taught by Dymetman to provide a stylus that “is not rotationally nor title angle (stylus/tablet) constrained.” Bennett, col. 3, lines 28 – 31.

**Claims 79 and 164**

Bennett teaches that, using a string of 11 bits, the number of unique TAC address is about 45 billion. Bennett, col. 10, lines 50 – 55. It would have been obvious to one of ordinary skill in the art at the time of the invention to increase the string length of Bennett to increase the number of unique TAC addresses to  $10^{15}$  to provide increase resolution if needed.

**Claims 80, 81, 165, 166**

Bennett teaches that each TAC has a size of 250 by 250 microns which is smaller than 10 millimeters. Thus, any 10 millimeter diameter subregion of the region includes sufficient coded data to identify the region. Bennett, col. 15, lines 28 – 52.

***Response to Arguments***

16. Applicant's arguments with respect to claims 1 - 180 have been considered but are moot in view of the new ground(s) of rejection.

***Double Patenting***

17. A rejection based on double patenting of the "same invention" type finds its support in the language of 35 U.S.C. 101 which states that "whoever invents or discovers any new and useful process ... may obtain a patent therefor ..." (Emphasis added). Thus, the term "same invention," in this context, means an invention drawn to identical subject matter. See *Miller v. Eagle Mfg. Co.*, 151 U.S. 186 (1894); *In re Ockert*, 245 F.2d 467, 114 USPQ 330 (CCPA 1957); and *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970).

A statutory type (35 U.S.C. 101) double patenting rejection can be overcome by canceling or amending the conflicting claims so they are no longer coextensive in scope. The filing of a terminal disclaimer cannot overcome a double patenting rejection based upon 35 U.S.C. 101.

Claims 1, 4, 82, and 86 are provisionally rejected under 35 U.S.C. 101 as claiming the same invention as that of claims 1, 3, 27, and 29 of copending Application No. 10/291,715. This

Art Unit: 2675

is a provisional double patenting rejection since the conflicting claims have not in fact been patented. Note that in addition to these claims, many of the dependant claims in these two applications are substantially duplicates of each other.

Claims 1, 4, 82, and 86 are provisionally rejected under 35 U.S.C. 101 as claiming the same invention as that of claims 1, 39, and 24 of copending Application No. 10/291,543. This is a provisional double patenting rejection since the conflicting claims have not in fact been patented. Note that in addition to these claims, many of the dependant claims in these two applications are substantially duplicates of each other.

18. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).



Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1, 4, 82, and 86 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1, 3, 27, and 29 of copending Application No. 10/291,715. Although the conflicting claims are not identical, they are not patentably distinct from each other.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Claims 1, 4, 82, and 86 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1, 39, and 24 of copending Application No. 10/291,543. Although the conflicting claims are not identical, they are not patentably distinct from each other.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

### ***Conclusion***

19. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Arai, Toshifumi et al. "PaperLink: A Technique for Hyperlinking from real Paper to Electronic Content," Proceedings of CHI 97 Human Factors in Computing Systems, Atlanta, Georgia; Mar. 22-27 1997, pp. 327-334.

Hinden, Robert M. "IP Next Generation Overview," Communication of the ACM, Jun. 1996, vol. 39, No. 6, pp. 61-71.

Art Unit: 2675

Mauth, Rainer "Make Digital Signatures More Secure," Byte, Oct. 1997.

Johnson, Walter et al. "Bridging the Paper and Electronic Worlds: The Paper User Interface," Proceedings of INTERCHI '93, Amsterdam, The Netherlands; Apr. 24-29, 1993, pp. 507-512.

Lamming, Michael G. et al. "Activity-Based Information Retrieval: Technology in Support of Human Memory," in Personal Computers and Intelligent Systems: Information Proceeding 92, Amsterdam, The Netherlands, 1992.

Nabeshima, Shinji et al. "Memo-Pen: A New Input Device," CHI '95 Proceedngs.

Robinson, Peter et al. "A Framework for Interacting with Paper," Proceedings of The European Association for Computer Graphics 18.sup.th Annual Conference Eurographics '97, Budapest, Hungary; Sep. 4-8, 1997, vol. 16, No. 3, pp. C329-C334.

20. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a).

Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

21. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Leland R. Jorgensen whose telephone number is 703-305-2650


Art Unit: 2675

(or 571-272-7768 after 2 March 2005). The examiner can normally be reached on Monday through Friday, 10:00 am through 6:00 pm..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sumati Lefkowitz can be reached on 703-306-0403. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

lrj



DENNIS-DOON CHOW  
PRIMARY EXAMINER